

**RE:** Big River Mine Tailings Superfund Site, St. Francois County, MO, Operable Unit 2 (OU 2)  
EPA comments on the Draft Feasibility Study submitted on June 3, 2015











**23. Page 1-13, paragraph 3, Distinct Difference in Geochemistry.** This paragraph is inaccurate and not supported by the data at the Site. While there is a distinct difference in geochemistry

between the St. Francois County and Washington County Mining Districts, there is evidence that the floodplain geochemistry in the lower Big River can be traced back to St. Francois County. According the Pavlowsky Report (June 2010), examination of the spatial patterns of the Pb:Zn ratios and their variations can yield clues to identify the sources of channel contamination in Jefferson County. The Pb:Zn ratios in contaminated floodplain deposits tend to increase downstream from <2 at Leadwood and Desloge, 4 to 8 at the Jefferson County Line, and up to 10 along the lower Big River. The high-ratio floodplain deposits in Jefferson County do not reflect local source influence, but rather transport of mining sediment contaminated from tailings released from tailings piles in St. Francois County. Local sediment supply from natural sources and tributary inputs in Jefferson County is largely a low-ratio source. Uncontaminated floodplain sediments along the Big River and both channel and floodplain sediments from Mill and Mineral Fork tributaries tend to have Pb:Zn ratios <1. However, Pb:Zn ratios tend to be much higher in samples from the Federal, National, and Bonne Terre Piles. Moreover, the two slime samples collected in this study had Pb:Zn ratios of 6 at the Bone Hole and 8 at Desloge in a river segment affected by tailings inputs with low ratios.

























